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Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C.

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FEDERAL COMMUNICATIONS COMMISSION OFFICE OF THE SECRETARY

In the Matter of

Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992

Compatibility Between Cable Systems and Consumer Electronics Equipment

ET Docket No.

#### REPLY COMMENTS OF THE CONSUMER ELECTRONICS GROUP OF THE ELECTRONIC INDUSTRIES ASSOCIATION

FEDERAL COMMUNICATIONS COMMISSION OFFICE OF THE SECRETARY

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April 21, 1993

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#### SUMMARY OF EIA/CEG REPLY COMMENTS

The Consumer Electronics Group of the Electronic

Industries Association ("EIA/CEG") hereby replies to comments

filed in response to the Commission's Notice of Inquiry

("Notice") concerning compatibility of consumer electronics

equipment and cable systems. Although the first-round

comments provide much valuable information and analysis that

should assist the Commission in meeting its responsibilities

under Section 17 of the Cable Television Consumer Protection

and Competition Act of 1992 ("Cable Act"), the cable

industry's comments -- regrettably -- are largely unresponsive

to the legislation passed by Congress and to the legitimate

consumer concerns that undergird the legislation.

Many of the cable industry pleadings challenge the basic principles and requirements of the compatibility provision of the Cable Act. They say that Congress misunderstood; compatibility is not a problem. They say that set-top boxes are beneficial to consumers, enabling the delivery of services consumers want, and they propose to increase the number, variety, complexity, and cost of the devices they place on consumers' premises. They ask that certain obligations imposed by the statute be construed into meaninglessness, and they seek to shift other burdens from cable companies onto consumer electronics manufacturers, retailers, and consumers.

The Commission must work with the statute as it was enacted into law, not as the cable industry wishes to have it rewritten. Although the Commission should consider the legitimate interests of all interested organizations, it is the interests of consumers that must be placed first.

Most of the cable parties' filings maintain that the short-term solution to compatibility issues is not to eliminate the use of converter boxes but to increase them. Specifically, they propose to provide dual-tuner converters, converters with RF bypass, converters with timers, splitters, and A/B switches -- all, of course, at additional cost to consumers. The cable industry's position is very much at odds with that of the primary author of the relevant statutory provision, Senator Patrick Leahy, and of another leading sponsor of the Act, then-Senator (and now-Vice President) Al Gore. It defies reason to think that the use of more boxes with more functions will meet the statutory objective of reducing complexity and cost to the consumer.

Mindful of Senator Leahy's intention to promote

"methods of signal denial -- such as trapping or interdiction
-- which do not require a converter box in the first place,"

EIA/CEG's first-round comments argued for use of modes of

signal delivery and control which allow consumers to access,

simultaneously and without needless wiring complications or

extra payments to their local cable company, all of the

channels for which they have paid. We did not propose to dictate which of the various available technologies would be used by any particular cable company; we merely asked that the Commission promote the use of technologies which provide for "in-the-clear" access to multiple channels. We stand by this position. The cable industry, however, argues strenuously against the use of any method of preventing signal piracy that does not require a set-top box.

we believe the Commission can and should compel the cable industry to adopt a less dismissive attitude toward consumer-friendly techniques such as interdiction and broadband descrambling. And we believe the Commission should explore changes in its rate regulation rules that give cable companies stronger incentives to consider deploying consumer-

updated version of Multiport, or some other decoder interface in TVs or VCRs. That this does nothing to improve the compatibility situation with the huge installed base of TVs and VCRs is ignored, as is the inevitable consequence of increased product costs for manufacturers and higher prices for consumers.

One area in which we had thought consensus was developing concerns the need for digital standards. The submission of the Advisory Group, reflecting the negotiated agreements of designated representatives of the consumer electronics and cable industries, unambiguously declares it to be "essential that a single standard be adopted for digital transmission and compression." Although many of the individual filings from the cable industry seek to attack that statement, we believe the Commission must not squander the opportunity to address issues of digital standardization -- for transmission, compression, and encryption -- now. EIA/CEG is prepared to take a leadership role in this effort.

The statute requires the Commission to define criteria that must be met before manufacturers or retailers would be allowed to market a TV or VCR as "cable-ready" or "cable-compatible." Many of the cable participants in this proceeding want the Commission to go much further. There are proposals to impose generalized labeling requirements applicable to all TVs and VCRs, whether or not they are

marketed with the term cable-ready. Even worse, there are proposals to regulate the design of consumer electronics products, forbidding products from having certain features unless they also have other characteristics. Such proposals would stand the statute on its head.

The Commission should not be dissuaded from fulfilling its responsibility to promote the commercial availability of remote controls and "converters." In particular, it should not be deterred from developing rules which apply to all set-top devices currently used in conjunction with cable service; proposals to narrow the language in contravention of legislative intent and common parlance should be rejected. Corrective measures are also needed to prevent cable operators from hindering competition in the supply of remote controls.

Act. The intentions and the specific requirements of this provision are fully consistent with the "consumer protection" and "competition" goals which are so central to the Act's purpose that they are reflected in its title. The consumer electronics industry, which supported enactment of this provision and of this statute, is eager to work cooperatively with the Commission to ensure that compatibility requirements are framed in a manner that fulfills the goals of protecting consumers and promoting competition. Consumers deserve no less.

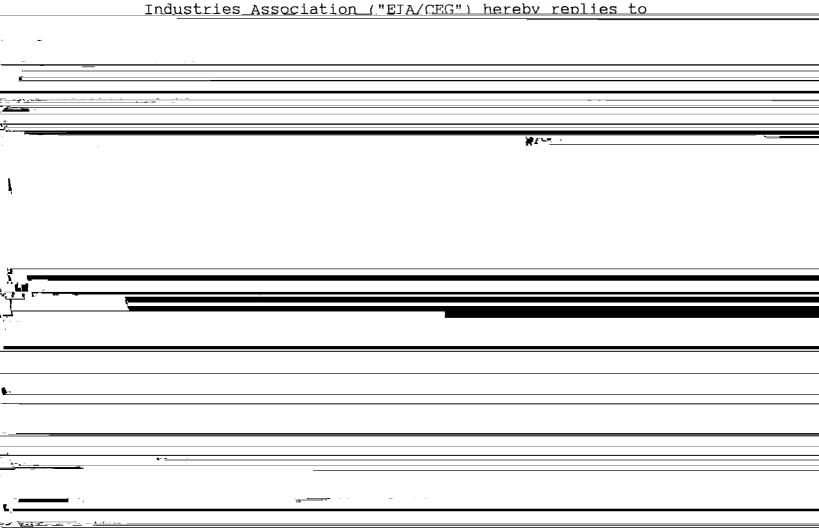


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The Consumer Electronics Group of the Electronic



by Congress and to the legitimate consumer concerns that undergird the legislation. 3

In the first round of comments, the cable industry appears to have followed the old adage about voting early and often. Two cable industry trade associations, at least nine cable system operators and multiple system operators ("MSOs"), and three related equipment and program companies submitted comments. Most of the pleadings of the cable companies and associations present similar positions, using similar arguments. If only the same degree of uniformity could be achieved in the technical characteristics of cable systems, the resolution of compatibility problems would be greatly simplified.

Many of the cable industry pleadings challenge the basic principles and requirements of the compatibility provision of the Cable Act. They say that Congress misunderstood; compatibility is not a problem. They argue that set-top boxes are beneficial to consumers, enabling the delivery of services consumers want, and they propose to increase the number, variety, complexity, and cost of the devices they place on consumers' premises. They ask that certain obligations imposed by the statute be construed into meaninglessness, and they seek to shift other burdens from

See, e.g., Comments of Booth American (cable law "demonstrates a great lack of industry understanding" and is based on "political concern and not public concern").

cable companies onto consumer electronics manufacturers, retailers, and consumers.

The Commission must work with the statute as it was enacted into law, not as the cable industry wishes to have it rewritten. Although the Commission should consider the legitimate interests of all interested organizations, it is the interests of consumers that must be placed first.

The first-round comments do reflect some progress toward the resolution of compatibility issues, and the most positive development of all is embodied in the joint submission by cable and consumer electronics interests. The comments of the Cable-Consumer Electronics Compatibility Advisory Group ("Advisory Group") expressly and unequivocally recognize the need to adopt "a single standard . . . for digital compression and transmission."4 Although the commitment reflected in this statement is undermined in the separate filings of the National Cable Television Association ("NCTA"), the Community Antenna Television Association ("CATA"), and individual cable companies, we believe the joint statement on this point may represent the single biggest stride in the direction of a long-term solution to compatibility problems.

Taken as a whole, the first-round record suggests that the prospects for compromise are relatively remote, and

<sup>4/</sup> Comments of Advisory Group at 19.

the need for leadership by the Commission remains acute. The Commission must not be deterred from moving forward to implement the legislation and to provide consumers relief from the cable industry's current practices.

I. THE CABLE INDUSTRY'S PROPOSAL TO INCREASE THE USE OF SET-TOP BOXES DOES NOT REPRESENT A MEANINGFUL SOLUTION TO THE PROBLEMS SECTION 17 OF THE ACT SOUGHT TO REMEDY.

The cable industry vigorously defends its use of set-top boxes. Most of the cable parties maintain that the short-term solution to compatibility issues is not to eliminate the use of converter boxes but to increase them. 5 Specifically, they propose to provide dual-tuner converters, converters with RF bypass, converters with timers, splitters, and A/B switches -- all, of course, at additional cost to consumers. 6

The cable industry's position is very much at odds with that of the primary author of the relevant statutory provision. Introducing the legislation that later became Section 17 of the Cable Act, Senator Patrick Leahy (D-VT) stated at the outset:

The bill I am introducing today -- the Cable-Ready Equipment Act of 1991 -- is aimed at a problem that more and more cable customers are confronting to their dismay: Namely, that the converter boxes

<sup>5/</sup> The term "converter" is used herein to refer to all manner of set-top boxes, as the legislation intended. See discussion infra at 29-34.

 $<sup>\</sup>frac{6}{at}$   $\frac{\text{See}}{\text{at}}$ , Comments of CATA at 9-11; Comments of TeleCable

many are required to use disable important features of their cable-ready TVs and VCRs.

\* \* \* \* \*

My bill would do a number of things to make cable equipment more user-friendly:

First, it would encourage cable systems to use methods of signal denial -- such as trapping or interdiction -- which do not require a converter box in the first place.

And yet, in the teeth of this unambiguous language, there are first-round comments which suggest that converters create, not incompatibility, but compatibility. 7

There is even an argument that "only 20-25 percent of . . . customers [surveyed by one cable company] objected strongly to the presence of set-top decoders." Of course, if that many strongly object, there is doubtless some significant additional percentage of consumers who object, but less strenuously. Companies which face competition -- and therefore need to be highly responsive to their customers' wishes -- would not so aggressively defend a practice that generates such powerful resentment among

<sup>&</sup>lt;u>5ee</u> Comments of Continental at 5-7; <u>see generally</u> Comments of TCI at 15 n.11 (criticizes "findings" section of legislation, claiming it exaggerates the compatibility problem and overlooks solutions).

<sup>8/</sup> Comments of TeleCable at 6.

<sup>9/</sup> Our own survey showed that more than 50 percent of cable subscribers who currently use a converter box would "strongly prefer" not to use one.

consumers and their elected representatives. 10 Indeed, as one local franchising authority notes, converters are the source of as many consumer complaints as are the rates charged for cable service. 11

Despite all this, the cable industry not only defends the status quo but insists that increased use of converter boxes, with added complexity (and extra cost to the consumer), is the best way to achieve the legislative objective. 12 NCTA even makes the astonishing suggestion that use of converters with RF bypasses and use of

<sup>10/</sup> Cf. Cong. Rec. 102d Cong., 2d Sess. at S 424 (Jan. 27, 1992)(Statement of Senator Gore)("Do you know what would happen in a normal business if 25 percent of all the customers or 45 percent of all the customers were dissatisfied with the service a company is providing? They would go to the competition"); "Keeping the Cable Customer Satisfied," Broadcasting, at 10 (Mar. 8, 1993)(30-40 percent of subscribers in one survey "say they would leave for competing service if they could," and president of surveyed company says, "We have to make it fun to be a subscriber. It's not fun to be a subscriber now").

<sup>11/</sup> See Comments of City of Mesa, Arizona at 1-2.

<sup>12/</sup> Apparently, the cable industry is to some extent proposing to use products that are not yet fully developed.

Cablevision, for example, favors a dual-decoder unit using two separate tuners and integral programming timers, which it expects to be available by the end of 1993. See Comments of Cablevision at 4. No cost estimate is given in the pleading, but cable industry trade publications suggest that dual-tuner units will "cost about one and three-quarters as much as standard units." "Cablevision, Paragon to Test Dual Tuner Boxes," Cable World, at 57 (Sep. 7, 1992). The cable pleadings nonetheless fault advocates of interdiction and broadband descrambling for favoring more expensive technologies and for relying on not-yet-available technology.

converters with timers "easily qualify as '80% solutions'" to the compatibility problem. 13 The cable industry has not disclosed what additional expense this would entail for the consumer, nor provided diagrams of the wiring complications that would result. 14 But it defies reason to think that the use of more boxes with more functions will meet the statutory objective of reducing complexity and cost to the consumer. 15 That objective should remain at the heart of the deliberations in this proceeding.

# II. THE COMMISSION SHOULD PROMOTE DELIVERY OF ALL CHANNELS TO CONSUMERS "IN THE CLEAR."

Mindful of Senator Leahy's intention to promote "methods of signal denial -- such as trapping or interdiction -- which do not require a converter box in the first place," EIA/CEG's first-round comments argued for use of modes of signal delivery and control which allow

<sup>13/</sup> Comments of NCTA at 6 n.8.

One cable company describes an NCTA publication which is said to "fully illustrate[] 27 short-term solutions using currently available equipment." Comments of TCI at 13. We, too, discussed this publication, explaining that the arrangements described present consumers with extremely complex configurations yet still do not allow for full use of all TV and VCR functions. Comments of EIA/CEG at 18-19 n.24.

Now that the Commission has taken action to reduce the prices charged for cable service, it is especially important to ensure that the cable industry does not circumvent the Commission's action by conjuring up new excuses for high converter fees and other equipment charges. See IX Phillip E. Areeda, Antitrust Law at ¶ 1712d (1991).

consumers to access, simultaneously and without needless wiring complications or extra payments to their local cable company, all of the channels for which they have paid. We did not propose to dictate which of the various available technologies would be used by any particular cable company; we merely argued that the Commission should promote the use of technologies which provide for "in-the-clear" access to multiple channels. We stand by this position.

The cable industry, however, argues strenuously against the use of any method of preventing signal piracy that does not require a set-top box. The cable pleadings

technology; it is used in a variety of settings; it meets cable's needs for signal security and flexibility in the provision of services. Most importantly, it is consumer friendly -- allowing consumers to use all of the features of their TVs and VCRs (and without requiring them to buy new equipment), just as Section 17 of the Cable Act requires.

The cable industry's primary objection to interdiction is economic: interdiction is said to require twice the capital investment necessary for set-top boxes. 16 We lack access to all of the cable industry's economic information that would permit a comprehensive economic analysis, 17 but several pertinent points can be made at this time. First, by the cable industry's own reckoning, production of interdiction equipment is currently relatively

<sup>16/</sup> See Comments of Time Warner, Appendix 1, at 5-6.

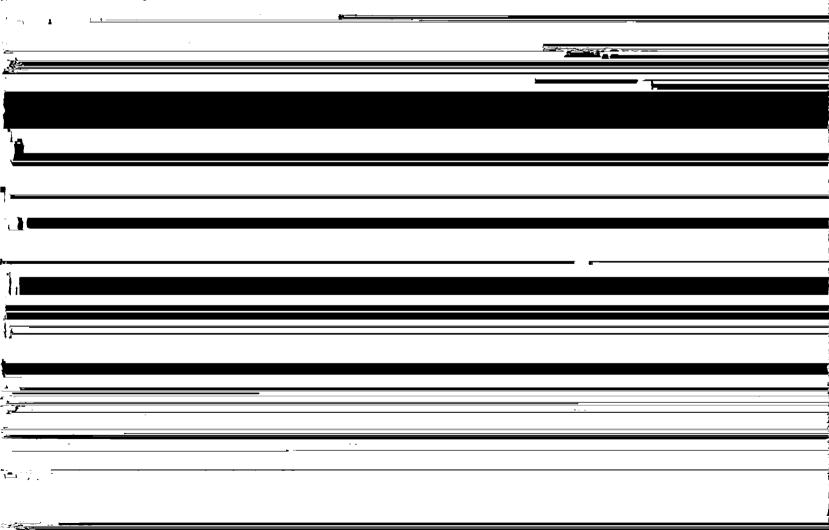
<sup>17/</sup> For example, the cash flow analysis presented by one cable company (TeleCable) relies on myriad assumptions whose validity is known only by that company. Generally speaking, however, it appears that some of the cable companies' estimates are presented so as to put interdiction in the worst possible light. Generally, a four-port interdiction unit costing about \$200 can serve up to four separate premises with incremental costs of \$75 each. Single-port units are reported to be available at approximately \$150 apjece. "Cablevision Systems Revives Interdiction

small. 18 If volumes were to increase by one or two orders of magnitude (as would occur were interdiction to be widely deployed), it is virtually certain that unit costs would drop sharply. Second, the economic analyses presented by the cable industry seem to overlook the cost benefits of interdiction. These include: increased subscription rates among homes passed by cable, increased sales of premium and pay-per-view services, fewer truck rolls, and reduced maintenance expenses. 19 Third, in operational terms, interdiction can provide for full addressable control and high signal quality -- avoiding the artifacts that can result from scrambling and descrambling. 20 Even if

See Comments of NCTA at 13 n.19 ("less than 80,000 subscriber homes nationwide"). We understand that a single

interdiction is not the best approach for <u>all</u> environments, it clearly provides a highly consumer-friendly solution that is directly responsive to the concerns underlying Section 17 of the Cable Act.

The cable industry comments also denigrate broadband descrambling. Here, the primary objection seems to be that the technology does not yet exist for use in the field; breadboard prototypes are all that is yet available. We believe this technology warrants more serious consideration. EIA/CEG engaged a technical expert to evaluate the broadband scrambling system under



Zenith's PM and Oak's sine wave, 22 and these are used in systems serving a small percentage of cable homes nationwide. It also reduces cable operators' up-front capital investment (because it can be deployed incrementally) and aggregate investment (because it need only be deployed at the homes of subscribers to premium and pay-per-view services).

We are aware of no inherent reason why the expense of broadband descrambling will be too great or its channel limitations too constricting. If, however, cable companies are determined to prevent this technology from reaching the marketplace, they will surely succeed. No one is likely to invest in this technology if the cable industry refuses to deploy it.

We believe the Commission can and should compel the cable industry to adopt a less dismissive attitude toward these two consumer-friendly techniques. And we believe the Commission should explore changes in its rate regulation rules that give cable companies stronger incentives to consider deploying consumer-friendly solutions

<sup>22/</sup> The existing prototype demonstrates operation with baseband sync suppression, but the technique will also accommodate RF sync suppression and video inversion. In addition, the system offers cable operators the opportunity to migrate to new, enhanced video scrambling methods -- without creating new compatibility problems for consumer equipment.

to access control.<sup>23</sup> Furthermore, we believe the Commission's ability to prohibit scrambling can be used as a lever to ensure that cable companies do not unreasonably foreclose the use of other, more consumer-friendly methods of preventing piracy.

of preventing piracy. THE COMMISSION SHOULD NOT REQUIRE MANDATORY INCLUSION III.

compatibility situation with the huge installed base of TVs and VCRs is ignored, as is the inevitable consequence of increased product costs for manufacturers and higher prices for consumers.

At the threshold, we must remind the Commission of the consumer electronics industry's unfortunate experience with Multiport during the mid- and late-1980s. EIA/CEG and NCTA worked on Multiport for several years, and several manufacturers spent millions of dollars incorporating it in hundreds of thousands of receivers, but cable operators failed to support it.<sup>25</sup> Over the years since 1987, roughly 100 million TVs and 50 million VCRs have been sold, and it is quite late in the day for cable now to decide that Multiport represents the ideal solution to compatibility problems. It cannot be that Congress intended consumers to have to purchase new TVs and VCRs, at additional expense, to enjoy the greater compatibility required by the Cable Act.<sup>26</sup>

In any event, the suitability of the original Multiport for present circumstances is, at best, very much in doubt. The cable industry comments do not acknowledge

Note, for example, the comments of one company which now touts EIA-563 but admits that it only bought 100 decoders,

this explicitly, but they implicitly admit it by referencing an EIA-563.x Decoder Interface, with the "x" used to indicate that EIA-563 as it currently exists "will likely be only the first version of this interface." No one can claim that the original Multiport is a panacea. It clearly does not work with one scrambling system (Zenith's PM system) and has never been tested with a whole family of additional systems. Moreover, there have been numerous changes in receiver design and cable system operations since Multiport was originally tested in 1986-87, and considerable time and effort would be required to ascertain to what extent these developments may compound the operational limitations already identified.

In addition to whatever time would be needed for development and testing of a new decoder interface, deployment of a new interface in receivers (and of compatible hardware in the cable plant) would surely require an additional interval. Thereafter, it would consume the better part of a decade before decoder-equipped receivers would be deployed to a sufficient extent that this could be said to represent a significant reduction in the

<sup>27/</sup> Comments of NCTA at 23-24 n.33; see Comments of TCI at 22-23 (citing need to "keep pace with the technological advances permeating the cable industry").

<sup>28/</sup> Multiport was only tested with 6 dB sync suppression systems, and its ability to accommodate the 10 dB sync suppression systems used today is not proven.

compatibility problem. The value of this effort can readily be questioned, considering that (1) digital compression is about to be introduced in the cable environment, (2) advanced television transmissions by broadcast and cable are likely within the next three years, and (3) the current NTSC broadcasting standard is slated for termination within the expected lifespan of the receivers sold today.

Above and beyond the questions of obsolescence and time needed for widespread deployment are questions of cost. We certainly cannot agree that decoder interfaces could be added at a trivial additional cost to the consumer. To the contrary, we believe the additional cost, at retail, of a decoder interface would be on the order of \$15-25. In a market where consumers have come to expect high performance at very low prices, the impact of such price increases could be disastrous. Moreover, the cost of the decoders

<sup>29/</sup> TCI claims Multiport can be added at an additional cost of "approximately \$5 per television set or VCR." Comments of TCI at 19.

<sup>30/</sup> The cable industry has also advocated numerous additional changes in receiver designs, including enhanced shielding, use of double-conversion tuners, channel mapping, and A/B switches. In the aggregate, these could add anywhere from \$60 to \$100 to the price of TVs and VCRs.

If a decoder interface were to be required on all TVs and VCRs, the resulting price increases could make it more difficult for some consumers to afford replacement products. If a decoder interface were to remain voluntary, then the cable industry would likely use this as an excuse to insist on continuing to provide set-top devices.

themselves, which the cable companies evidently plan to provide on a sole-source basis, must also be considered. This could add another several dollars a month to cable's revenue requirements -- and, thus, to consumers' bills.

It is not true, as one party suggests, that Multiport is required to be included in TVs sold in France and elsewhere in Europe. 32 France does require something called a "Scart plug," but this is not the same as Multiport. The Scart plug is designed to facilitate use of TVs with VCRs, personal computers, and the like. The automatic gain control function is not "brought out" to the interface, and the interface cannot handle scrambling. Use of this interface would not solve compatibility problems presented by cable systems in the United States.

The best argument of all against Multiport is that it is unnecessary. So long as the Commission does what is necessary to ensure that consumers can enjoy simultaneous, in-the-clear access to all of the channels for which they have paid, there is no reason even to discuss decoder interfaces. Were the Commission to decide otherwise (and we would strenuously resist such a determination), we would firmly insist that (1) inclusion of the decoder interface in TVs and VCRs be voluntary (i.e., at the option of the manufacturer), (2) the cable industry commit to support the

<sup>32/</sup> See Comments of Time Warner at 58.

interface with the necessary hardware, (3) consumers be protected against any additional changes in cable systems that would require set-top boxes even in homes with decoder interface-equipped receivers, <sup>33</sup> and (4) cable rate structures be required to ensure that the cable operators' cost savings (the difference in cost between converters and decoder hardware) are passed through to consumers. <sup>34</sup>

We are open to further discussion on decoder interface issues, but we firmly believe that "in-the-clear" delivery techniques -- such as interdiction and broadband descrambling -- are much more consistent with the intent of Section 17 of the Cable Act.